

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE**  
**BOARD OF PATENT APPEALS AND INTERFERENCES**

**APPLICANT(S):** Yong-Jun KWAK, et al.      **GROUP ART UNIT:** 2616  
**APPLICATION NO.:** 10/079,723      **EXAMINER:** Mills, Donald L.  
**FILING DATE:** February 19, 2002      **DATED:** December 12, 2007  
**FOR:** **DPCH MULTIPLEXING APPARATUS AND METHOD FOR  
OUTER LOOP POWER CONTROL IN A W-CDMA  
COMMUNICATION SYSTEM**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**APPEAL BRIEF (37 C.F.R. 41.37)**

Sir:

This brief is in furtherance of the Notice of Appeal, filed in this case on September 13, 2007.

**REAL PARTY IN INTEREST**

The real party in interest is Samsung Electronics Co. Ltd., the assignee of the subject application, having an office at 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea.

**RELATED APPEALS AND INTERFERENCES**

To the best of Appellant's knowledge and belief, there are no currently pending related appeals, interferences or judicial proceedings.

**STATUS OF CLAIMS**

**A. TOTAL NUMBER OF CLAIMS IN APPLICATION**

Claims in the application are: 1-3 and 7-9.

**B. STATUS OF ALL THE CLAIMS IN APPLICATION**

1. Claims cancelled: 4-6 and 10-12.
2. Claims withdrawn from consideration but not cancelled: None
3. Claims pending: 1-3 and 7-9.
4. Claims allowed: None
5. Claims rejected: 1-3 and 7-9.
6. Claims objected to: None.

**C. CLAIMS ON APPEAL**

The claims on appeal are: 1-3 and 7-9. For the purposes of this appeal, Claims 1-3 stand or fall together, Claims 7-9 stand or fall together.

**STATUS OF AMENDMENTS**

On March 22, 2006, the Examiner issued the First Office Action on the merits (FOAM). The Examiner restricted Claims 1-3 and 7-9 to class 370, subclass 318 and Claims 4-6 and 7-9 to class 370, subclass 505. Subsequently, an amendment was filed on April 20, 2006, in which Claims 4-6 and 10-12 were cancelled in order to comply with the restriction requirement. The Examiner issued a second Office Action on July 31, 2006. A response to that Office Action was filed on November 30, 2006, in which Claims 1 and 7 were amended. Arguments distinguishing the invention from the references of record were presented. The Examiner issued a Final Office Action on March 8, 2007. A response to the Final Office Action was filed on June 8, 2007. On September 10, 2007, a Notice of Appeal was filed for want of a timely response from the Patent Office. Subsequently, on September 12, 2007 the Examiner issued an Advisory Action.

**SUMMARY OF CLAIMED SUBJECT MATTER**

**A. CLAIM 1 – INDEPENDENT**

Claim 1 is directed to a method for transmitting a dedicated physical data channel signal over a dedicated physical data channel in the absence of transmission data to be transmitted over the dedicated physical data channel by attaching the CRC bit stream to the dummy bit stream over a dedicated physical data channel in order to maintain the target SIR (Signal-to-Interference Ratio) when there exists new transmission data after the absence of the transmission data in a CDMA (Code Division Multiple Access) mobile communication system. The method comprises generating a dummy bit generation request signal in the absence of the transmission data; and upon receipt of the dummy bit generation request signal, generating a dummy bit stream, and transmitting a dedicated physical data channel signal created by attaching the CRC bit stream to the dummy bit stream.

The above method is described in the Specification at page 11, lines 11-20.

**B. CLAIM 7 – INDEPENDENT**

Claim 7 is directed to an apparatus for transmitting a dedicated physical data channel signal over a dedicated physical data channel in the absence of transmission data to be transmitted over the dedicated physical data channel by attaching the CRC bit stream to the dummy bit stream over a dedicated physical data channel in order to maintain the target SIR when there exists new transmission data after the absence of the transmission data in a CDMA mobile communication system. The apparatus includes a controller for generating a dummy bit generation request signal in the absence of the transmission data; a dummy bit generator for generating a dummy bit stream upon receipt of the dummy bit generation request signal; a CRC (Cyclic Redundancy Check) attachment part for attaching a CRC bit stream to the dummy bit stream; and a channel multiplexing part for mapping a first bit stream created by attaching the CRC bit stream to the dummy bit stream, to the dedicated physical data channel.

The above apparatus is described in the Specification at page 10, line 28 to page 11, line 8.

**GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

**A. GROUND OF REJECTION 1 (Claims 1-3)**

Claims 1-3 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Wu (U.S. Patent No. 6,836,469) in view of Fang (U.S. Patent No. 5,481,561).

**B. GROUND OF REJECTION 2 (Claims 7-9)**

Claims 7-9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Wu (U.S. Patent No. 6,836,469) in view of Fang (U.S. Patent No. 5,481,561).

**ARGUMENT**

**A. GROUND OF REJECTION 1 (Claims 1-3)**

**A.1. Claim 1**

Appellants initially show error in the rejection of Claim 1 in that the Examiner misconstrues the teachings of the cited reference Fang. More specifically, the Examiner acknowledged that Wu does not disclose, “transmitting a dedicated physical data channel signal”. The Examiner then asserts that Fang teaches mitigating “near-far” problems inherent in a CDMA system by sending dummy data in the speech pausing period in data channels. It was brought to the Examiner’s attention that this assertion is not understood; and further clarification was requested. Second, the citation (Fang:col. 4, lines 62-66) reveals something entirely different than mitigating “near-far” problems inherent in a CDMA system as alleged by the Examiner. Fang discloses, teaches or suggests no structure corresponding to “maintaining the target SIR (Signal-to-Interference Ratio) ” of the invention. In fact, Fang teaches away from the invention. Fang teaches the “use of uplink power control” whereas the invention teaches maintaining the target SIR (Signal-to-Interference Ratio). Fang’s teachings would have led in a direction divergent from the path taken by the inventor. The use of uplink power control would destroy maintaining the target SIR (Signal-to-Interference Ratio), because a change in power necessarily affects the target SIR. As a result, Fang teaches away from the invention, and therefore does not teach or suggest transmitting a dedicated physical data channel signal over a dedicated physical data channel in Claim 1.

More importantly, a corollary of “teaching away” is “likelihood of success” and analysis under 35 U.S.C. § 103(a) requires consideration whether the prior art would have revealed that one of ordinary skill would have had a “reasonable expectation of success” in making the modification or combination. *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed Cir. 1991). “Success” refers to whether a proposed modification or combination would have actually produced a claimed invention. See *In re Naylor*, 369 F.2d 765, 768, 152 USPQ 106, 108 (CCPA 1966). Applicants respectfully submit that the proposed combination of Wu and Fang would fail to produce the claimed invention. As articulated above, because Fang teaches away from the

invention, the net result of the combination of Wu and Fang would likewise teach away from the invention. It therefore follows that a reasonable expectation of success is unlikely.

Assuming arguendo that Fang did not teach away from the invention, it does not however, cure the deficiency of Wu. Fang discloses transmitting corresponding spread spectrum signals at a reduced level by a factor of k. (See col. 4, lines 61-65). However, Claim 1 recites transmitting a dedicated physical data channel signal created by attaching the CRC (Cycle Redundancy Check) bit stream to the dummy bit stream over a dedicated physical data channel in order to maintain the target Signal-to-Interference Ratio (SIR). As a result, the combination of Wu in view of Fang or any of the references alone fails to teach or suggest each and every element of Claim 1. Thus, Wu in view of Fang fails to present a *prima facie* case of obviousness with respect to Claim 1.

Appellants have shown that there are missing claimed features not taught or suggested by the cited references, and thus Claim 1 has been erroneously rejected under 35 U.S.C. §103(a). The Examiner has not established a *prima facie* showing of obviousness<sup>1</sup>.

Still further, in reply to the argument that neither Wu nor Fang disclose, teach, or otherwise make obvious transmitting a dedicated physical data channel signal over a dedicated physical data channel in order to maintain the target SIR, the Examiner argues that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. The Examiner alleged that the prior art structure is capable of performing the intended use, and thus it meets the claim. Appellants urge to the contrary.

The structure of the present invention, namely “a dedicated physical data channel”, is different from that of the prior art. After reviewing Fang, Appellants are unable to find any section of Fang that teaches or fairly suggests “a dedicated physical data channel.” Fang refers to a pause detector as shown in Fig. 7. (See col. 5, lines 9-13).

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<sup>1</sup> In rejecting claims under 35 U.S.C. §103, the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The burden of coming forward with evidence or argument shifts to the Applicant only if the Examiner’s burden is met. Id. To establish a *prima facie* case of obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. MPEP 2143.03. See also. In re Royka, 490 F.2d 580 (C.C.P.A. 1974). If the Examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

It appears the Examiner did not consider the limitation in its entirety and consequently did not accord any patentable weight to certain words within the context of the claims. All words in a claim must be considered in judging the patentability of that claim against the prior art. See MPEP §2143.03. One cannot divine claim meaning in a vacuum. *Philips v. AWH Corporation* (Fed. Cir. July 12, 2005).

The present invention is not limited to merely a part of a limitation, the limitation in its entirety must be considered. The Examiner was asked to examine the entire limitation to wit, “transmitting a dedicated physical data channel signal created by attaching the CRC (Cycle Redundancy Check) bit stream to the dummy bit stream over a dedicated physical data channel in order to maintain the target SIR (Signal-to-Interference Ratio).” The Examiner, in the Advisory Action responded by stating that Wu discloses transmitting data packets 78<sub>1</sub>-78<sub>3</sub> via data channels 70<sub>1</sub>-70<sub>3</sub>. The Examiner noted that this disclosure of Wu is “logically equivalent to dedicated physical data channel.” The Examiner did not provide any explanation and rationale as to why the prior art element is an equivalent as is required under those circumstances. (See MPEP §2183). The Examiner simply stated that the two elements are logically equivalent.

It is not clear what the Examiner means by “logically equivalent,” however, it is exceedingly clear that a *prima facie* case of equivalence is nonexistent in this case, because there is no factual basis to support the conclusion that these two elements at issue are equivalent. MPEP §2184 (II) states: Among the indicia that will support a conclusion that one element is or is not an equivalent of another are:

(A) Whether the prior art element performs the identical function specified in the claim in substantially the same way and produces substantially the same results as the corresponding element disclosed in the specification. *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000).

In the Advisory Action, the Examiner cites col. 9, lines 32-37 as “logically equivalent” to dedicated physical data channel. The cited passage is reproduced here for ease of comparison.

(3) Data transmission phase: the mobile stations send data packets 78<sub>1</sub>-78<sub>3</sub> on data channels 70<sub>1</sub>-70<sub>3</sub> if the channel assignment commands indicate that the short packets 76<sub>1</sub>-76<sub>3</sub> sent by the mobile stations 74<sub>1</sub>-74<sub>3</sub> are valid.

In fact, Wu’s disclosure is the polar opposite of the claimed recitation. Wu teaches that the communication channels are divided into two sets, N data channels and M+1 control channels. (See col. 9, lines 11-14). The present invention claims a dedicated physical data

channel in order to maintain the target Signal-to-Interference Ratio (SIR) whereas Wu discloses the mobile stations wait for channel assignment commands (CAC). (See col. 9, lines 28-31). With a dedicated physical channel as claimed by the present invention, the need for channel assignment is rather negated. Therefore, the test for an “equivalent” is not satisfied since the first indicium does not support the conclusion that an element is an equivalent.

Appellants have further shown that the Examiner has not established a *prima facie* showing of obviousness. All claim limitations must be taught or suggested. (See MPEP §2143.03 and MPEP §707.07). The Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the Examiner does not set forth a *prima facie* case, as in this case, the applicant is under no obligation to submit evidence of nonobviousness. (See MPEP § 2142). Appellants respectfully submit that the Examiner failed to sustain a *prima facie* case of obviousness and thus Claim 1 has been erroneously rejected under 35 U.S.C. §103(a).

#### **A.2. Claim 2**

Appellants show error in the rejection of Claim 2 for the reasons given above with respect to Claim 1 upon which Claim 2 depends.

#### **A.3. Claim 3**

Appellants show error in the rejection of Claim 3 for the reasons given above with respect to Claim 1 upon which Claim 3 depends.

**B. GROUND OF REJECTION 2 (Claims 7-9)**

**B.1. Claim 7**

Appellant shows error in the rejection of Claim 7 for the reasons given above with respect to Claim 1, because Claim 7 recites a similar limitation.

**B.2. Claim 8**

Appellant shows error in the rejection of Claim 8 for the reasons given above with respect to Claim 7 upon which Claim 8 depends.

**B.3. Claim 9**

Appellant shows error in the rejection of Claim 9 for the reasons given above with respect to Claim 7 upon which Claim 9 depends.

**CONCLUSION**

Appellants have shown multiple errors in the Examiner's final rejection of the claims in the present case. Therefore, based on at least the foregoing, and as the Examiner has failed to make out a *prima facie* case for an obviousness rejection, the rejection of Claims 1-3 and 7-9 must be reversed.

It is well settled that in order for a rejection under 35 U.S.C. §103(a) to be appropriate, the claimed invention must be shown to be obvious in view of the prior art as a whole. A claim may be found to be obvious if it is first shown that all of the recitations of a claim are taught in the prior art or are suggested by the prior art. *In re Royka*, 490 F.2d 981, 985, 180 U.S.P.Q. 580, 583 (C.C.P.A. 1974), cited in M.P.E.P. §2143.03.

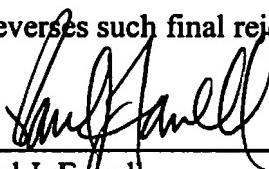
Fang, or Wu, or the combination thereof does not render independent Claims 1 and 7 obvious. Thus, independent Claims 1 and 7 are allowable.

Accordingly, dependent Claims 2-3 and 8-9 are allowable because of their dependence upon independent Claims 1 and 7.

The Examiner has failed to show that all of the recitations of Claims 1-3 and 7-9 are taught, disclosed or fairly suggested by Fang or Wu, or the combination thereof. Accordingly, the Examiner has failed to make out a *prima facie* case for an obviousness rejection.

Appellant respectfully requests that the Board reverses such final rejection.

By:



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Paul J. Farrell  
Reg. No. 33,494  
Attorney For Applicant

Dated: December 12, 2007

**THE FARRELL LAW FIRM, PC**  
333 Earle Ovington Blvd., Suite 701  
Uniondale, New York 11553  
(516) 228-3565 (tel)  
(516) 228-8475 (fax)  
PJF/EC:fl

**CLAIMS APPENDIX**

The text of the claims involved in the appeal is:

1. (Currently Amended) A method for transmitting a dedicated physical data channel signal over a dedicated physical data channel in the absence of transmission data to be transmitted over the dedicated physical data channel in order to properly maintain a target SIR (Signal-to-Interference Ratio) when there exists new transmission data after the absence of the transmission data in a CDMA (Code Division Multiple Access) mobile communication system, comprising the steps of:

generating a dummy bit generation request signal in the absence of the transmission data; and

upon receipt of the dummy bit generation request signal, generating a dummy bit stream, and transmitting a dedicated physical data channel signal created by attaching the CRC (Cycle Redundancy Check) bit stream to the dummy bit stream over a dedicated physical data channel in order to maintain the target SIR (Signal-to-Interference Ratio).

2. (Original) The method as claimed in claim 1, wherein the dummy bit stream is equal in a number of bits to data bits transmitted over the dedicated physical data channel when the transmission data is present.

3. (Original) The method as claimed in claim 1, wherein the dummy bit stream has a predetermined number of bits.

Claims 4-6. (Cancelled)

7. (Currently Amended) An apparatus for transmitting a dedicated physical data channel

signal over a dedicated physical data channel in the absence of transmission data to be transmitted over the dedicated physical data channel in order to properly maintain a target SIR when there exists new transmission data after the absence of the transmission data in a CDMA mobile communication system, comprising:

a controller for generating a dummy bit generation request signal in the absence of the transmission data;

a dummy bit generator for generating a dummy bit stream upon receipt of the dummy bit generation request signal;

a CRC (Cyclic Redundancy Check) attachment part for attaching a CRC bit stream to the dummy bit stream; and

a channel multiplexing part for mapping a first bit stream created by attaching the CRC bit stream and the dummy bit stream to the dedicated physical data channel in order to maintain the target SIR (Signal-to-Interference Ratio).

8. (Original) The apparatus as claimed in claim 7, wherein the dummy bit stream is equal in bit number to data bits transmitted over the dedicated physical data channel when the transmission data is present.

9. (Original) The apparatus as claimed in claim 7, wherein the dummy bit stream has a predetermined number of bits.

Claims 10-12. (Cancelled)

**EVIDENCE APPENDIX**

There is no evidence to be presented.

**RELATED PROCEEDINGS APPENDIX**

There are no related proceedings.